

Bölüm 10

KRONİK ALKOL KULLANIMINDA BESLENME BOZUKLUKLARI VE KİLO KAYBINA YAKLAŞIM

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GİRİŞ

Alkol tüketimi ve beslenme arasında karmaşık bir etkileşim söz konusudur. Günde bir ila iki bardak veya daha az alkollü içecek tüketen hafif-orta şiddette içiciler de dahil olmak üzere birçok kişi, alkollü içecekleri normal diyetlerinin bir parçası olarak görürler ve içeceklerden kalori almaktadırlar. Bununla birlikte, aşırı alkol tüketimi gündeme geldiğinde; alkol, içicinin beslenme durumunda olumsuz etkiler ortaya çıkararak fiziksel hastalıklara neden olabilir. Örneğin, alkol alımı, diğer besinlerin organizma tarafından absorpsiyonu ve çeşitli besin maddelerinin kullanımını değiştirebilir. Ek olarak, alkol, metabolizması sonucunda ortaya çıkan toksik bileşikler, özellikle de alkol eliminasyonunun %90-98'inin gerçekleştiği karaciğerde ciddi hasarlara neden olabilmektedir (1, 2).

Genel Bakış

Alkol kullanım bozukluğu hem bireysel hem de toplumsal düzeyde bedensel ve ruhsal açıdan ciddi olumsuzluklar doğurmaktadır. Ne yazık ki alkol kullanımı giderek artmakta tüm dünyada yoğun alkol tüketen bireylerin yaygınlığının %16 olduğu tahmin edilmektedir. Alkol kullanımını tıbbi açıdan önemli kılan nedenlerden biri de sıklıkla gözden kaçırılmakta ya da atlanmakta olan beslenme alışkanlıklarında olumsuz değişikliklerin ortaya çıkması ve çoğunlukla yanlış diyet uygulamalarıdır. Alkol kullanım bozukluğu olan pek çok hastada ya çok az miktarda temel besin maddesi (örneğin, karbonhidratlar, proteinler ve vitaminler) aldıkları için ya da alkol ve metabolizması bu besinlerin uygun şekilde emilmesi, sindirilmesi ve kullanılmasını engellediği için malnütrisyona rastlanmaktadır. Sonuç olarak, alkol kullanım bozukluklarında sıklıkla proteinlerde ve vitaminlerde

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lenme yönetimi yaklaşımları alkolik karaciğer hastalığının önlenmesinde veya iyileştirilmesinde önemli araçlar olabilir.

KAYNAKLAR

1. Lieber CS. Medical and Nutritional Complications of Alcoholism: Mechanisms and Management. New York: Plenum Press; 1992.
2. Lieber CS. Alcohol: Its metabolism and interaction with nutrients. Annual Review of Nutrition. 2000;20:395–430.
3. Lieber CS. Relationships between Nutrition, Alcohol Use and Liver Disease. Alcohol Res Health. 2003; 27(3): 220–231.
4. Pirola RC, Lieber CS. The energy cost of the metabolism of drugs including ethanol. Pharmacology. 1972;7:185–196.
5. Lieber CS. Perspectives: Do alcohol calories count? American Journal of Clinical Nutrition. 1991;54:976–982.
6. Feinman L, Lieber CS. Nutrition and diet in alcoholism. In: Shils ME, Olson JA, Shike M, Ross AC, editors. Modern Nutrition in Health and Disease. 9th ed. Baltimore: Williams & Wilkins; 1998. pp. 1523–1542.
7. Thorley H, Porter K, Fleming C, Jones T, Kesten J, Marques E, et al. Interventions for preventing or treating malnutrition in problem drinkers who are homeless or vulnerably housed: protocol for a systematic review. Syst Rev 2015;4:31
8. White GE, Mair C, Richardson GA, Courcoulas AP, King WC. Alcohol Use Among U.S. Adults by Weight Status and Weight Loss Attempt: NHANES, 2011–2016. Am J Prev Med 2019;57(2):220–230.
9. Sayon-Orea C, Martinez-Gonzalez M, Bes-Rastrollo M. Alcohol consumption and body weight: a systematic review. Nutr Rev. 2011;69 (8):419–431.
10. Traversy G, Chaput J-P. Alcohol consumption and obesity: an update. Curr Obes Rep. 2015;4(1):122–130.
11. Gruchow HW, Sobociaski KA, Barboriak JJ. Alcohol nutrient intake and hypertension in U.S. adults. JAMA: Journal of the American Medical Association. 1985;253:1567–1570.
12. Adibi SA, Baraona E, Lieber CS. Effects of ethanol on amino acids and protein metabolism. In: Lieber CS, editor. Medical and Nutritional Complications of Alcoholism: Mechanism and Management. New York: Plenum Press; 1992. pp. 127–155
13. Liu S, Serdula MK, Williamson DF, Mokdad AH, Byers T. A prospective study of alcohol intake and change in body weight among US adults. Am. J. Epidemiol. 1994;140:912–20
14. Leo MA, Lowe N, Lieber CS. Potentiation of ethanol-induced hepatic vitamin A depletion by phenobarbital and butylated hydroxytoluene. Journal of Nutrition. 1987;117:70–76.
15. Leo MA, Lieber CS. Alcohol, vitamin A, and beta-carotene: Adverse interactions, including hepatotoxicity and carcinogenicity. American Journal of Clinical Nutrition. 1999;69:1071–1085.
16. Sato M, Lieber CS. Hepatic vitamin A depletion after chronic ethanol consumption in baboons and rats. Journal of Nutrition. 1981;111:2015–2023.
17. Leo MA, Kim CI, Lowe N, Lieber CS. Interaction of ethanol with β -carotene: Delayed blood clearance and enhanced hepatotoxicity. Hepatology. 1992;15:883–891.
18. Ahmed S, Leo MA, Lieber CS. Interactions between alcohol and beta-carotene in patients with alcoholic liver disease. American Journal of Clinical Nutrition. 1994;60:430–436.
19. Leo MA, Rosman A, Lieber CS. Differential depletion of carotenoids and tocopherol in liver diseases. Hepatology. 1993;17:977–986.
20. Leo MA, Kim C, Lieber CS. Increased vitamin A in esophagus and other extrahepatic tissues after chronic ethanol consumption in the rat. Alcoholism: Clinical and Experimental Research. 1986;10:487–492.
21. Leo MA, Lieber CS. Alcohol, vitamin A, and beta-carotene: Adverse interactions, including hepatotoxicity and carcinogenicity. American Journal of Clinical Nutrition. 1999;69:1071–1085.

22. Leo MA, Sato M, Lieber CS. Effect of hepatic vitamin A depletion on the liver in humans and rats. *Gastroenterology*. 1983;84:562–572.
23. Leo MA, Lieber CS. Hepatic fibrosis after long-term administration of ethanol and moderate vitamin A supplementation in the rat. *Hepatology*. 1983;3:1–11.
24. Leo MA, Lieber CS. Hepatic vitamin A depletion in alcoholic liver injury. *New England Journal of Medicine*. 1982;307:597–601.
25. Alpha-Tocopherol Beta-Carotene Cancer Prevention Study Group. The effect of vitamin E and beta carotene on the incidence of lung cancer and other cancers in male smokers. *New England Journal of Medicine*. 1994;330:1029–1035.
26. Albanes D, Heinonen OP, Taylor PR, et al. α -tocopherol and β -carotene supplements and lung cancer incidence in the Alpha-Tocopherol Beta-Carotene Cancer Prevention Study: Effects of baseline characteristics and study compliance. *Journal of the National Cancer Institute*. 1996;88:1560–1571.
27. World MJ, Ryle PR, Jones D, Shaw GK, Thomson AD. Differential effect of chronic alcohol intake and poor nutrition on body weight and fat stores. *Alcohol Alcohol*. 1984;19:281–90).
28. Reisenauer AM, Buffington CAT, Villanueva JA, Halsted CH. Folate absorption in alcoholic pigs: in vivo intestinal perfusion studies. *Am. J. Clin. Nutr.* 1989;50:1429–35
29. Said HM, Strum WB. Effect of ethanol and other aliphatic alcohols on the intestinal transport of folates. *Digestion*. 1986;35:129–35
30. van der Beek EJ, Lowik MR, Hulshof KF, Kistemaker C. Combinations of low thiamin, riboflavin, vitamin B6 and vitamin C intake among Dutch adults (Dutch Nutrition Surveillance System). *J. Am. Coll. Nutr.* 1994;13:383–91.
31. Rosenthal WS, Adham NE, Lopez R, Cooperman JM. Riboflavin deficiency in complicated chronic alcoholism. *Am. J. Clin. Nutr.* 1973;26:858–60.
32. Kim C-I, Roe DA. Development of fibroflavin deficiency in alcohol-fed hamsters drug-nutrient interactions. *Drug Nutr. Interact.* 1985;3:99–107.
33. Marotta F, Labadarios D, Frazer L, Girdwood A, Marks IN. Fatsoluble vitamin concentration in chronic alcohol-induced pancreatitis. *Dig. Dis. Sci.* 1994;39:993–98.
34. Bjorneboe GE, Bjorneboe A, Hagen BF, Mirland J, Drevon CA. Reduced hepatic alpha-tocopherol content after longterm administration of ethanol to rats. *Biochim. Biophys. Acta* 1987;918:236–41.
35. Kawase T, Kato S, Lieber CS. Lipid peroxidation and antioxidant defense systems in rat liver after chronic ethanol feeding. *Hepatology* 1989;10:815–21.
36. Chapman RW, Morgan MY, Bell R, Sherlock S. Hepatic iron uptake in alcoholic liver disease. *Gastroenterology* 1983;84:143–47.
37. Chapman RW, Morgan MY, Boss AM, Sherlock S. Acute and chronic effects of alcohol on iron absorption. *Dig. Dis. Sci.* 1983;28:321–27
38. Olynk J, Hall P, Sallie R, Reed W, Shilkin K, Mackinnon M. Computerized measurement of iron in liver biopsies: a comparison with biochemical iron measurement. *Hepatology* 1990;12:26–30.
39. Poo JL, Rosas-Romero R, Rodriguez F, Silencio JL, Muñoz R, et al. Serum zinc concentrations in two cohorts of 153 healthy subjects and 100 cirrhotic patients from Mexico City. *Dig. Dis.* 1995;13:136–42.
40. Fonda ML, Brown SG, Pendleton MW. 1989. Concentration of vitamin B6 and activities of enzymes of B6 metabolism in the blood of alcoholic and nonalcoholic men. *Alcohol Clin. Exp. Res.* 3:804–9.
41. Finkelstein JD, Martin JJ. 1986. Methionine metabolism in mammals. Adaptation to methionine excess. *J. Biol. Chem.* 261:1582–87
42. Montanari A, Simoni I, Vallisa D, Trifiro A, Colla R, et al. 1988. Free amino acids in plasma and skeletal muscle of patients with liver cirrhosis. *Hepatology* 8:1034–39
43. Horowitz JH, Rypins EB, Henderson JM, Heymsfield SB, Moffitt SD, et al. 1981. Evidence for impairment of transsulfuration pathway in cirrhosis. *Gastroenterology* 81:668–75

44. Duce AM, Ortiz P, Cabrero C, Mato JM. 1988. S-adenosyl-L-methionine synthetase and phospholipid methyltransferase are inhibited in human cirrhosis. *Hepatology* 8:65–68
45. Lu SC. 1998. Methionine adenosyltransferase and liver disease: It's all about SAM. *Gastroenterology* 114:403–7
46. Hirata F, Axelrod J. Phospholipid methylation and biological signal transmission. *Science* 1980;209:1082–90.
47. Yamada S, Mak KM, Lieber CS. 1985. Chronic ethanol consumption alters rat liver plasma membranes and potentiates release of alkaline phosphatase. *Gastroenterology* 88:1799–806.
48. Lieber CS, Casini A, DeCarli LM, Kim C, Lowe N, et al. 1990. S-adenosyl-L-methionine attenuates alcohol-induced liver injury in the baboon. *Hepatology* 11:165–72
49. Giudici GA, Le Grazie C, Di Padova C. 1992. The use of adenosylmethionine (SAME) in the treatment of cholestatic liver disorders: meta-analysis of clinical trials. In *Methionine Metabolism: Molecular Mechanism and Clinical Implications*, ed. JM Mato, C Lieber, N Kaplowitz, A Caballero, pp. 67–79. Madrid: CSIC
50. Vendemiale G, Altomare E, Trizio T, Le Grazie C, Di Padova C, et al. 1989. Effect of oral S-adenosyl-L-methionine on hepatic glutathione in patients with liver disease. *Scand. J. Gastroenterol.* 24:407–15
51. Mato JM, C´amara J, Fern´andez de Paz J, Caballer´ia L, Coll S, et al. 1999. S-adenosylmethionine in alcoholic liver cirrhosis: a randomized, placebo-controlled, double-blind, multicentre clinical trial. *J. Hepatol.* 30:1081–89
52. Thomson AD, Majumdar SK. The influence of ethanol on intestinal absorption and utilization of nutrients. *Clin. Gastroenterol.* 1981;10:263–93.
53. Breen KJ, Buttigieg R, Lossifidis S, Lourensz C, Wood B. Jejunal uptake of thiamin hydrochloride in man: influence of alcoholism and alcohol. *Am. J. Clin. Nutr.* 1985;42:121–26.
54. Katz D, Metz J, van der Westhuyzen J. Intestinal absorption of thiamin from yeast-containing sorghum beer. *Am. J. Clin. Nutr.* 1985;42:666–70.,
55. Chedid A, Mendenhall CL, Gartside P, et al. Prognostic factors in alcoholic liver disease. *American Journal of Gastroenterology.* 1991;82:210–216.
56. Mendenhall C, Roselle GA, Gartside P, et al. Relationship of protein calorie malnutrition to alcoholic liver disease: A reexamination of data from two Veterans Administration Cooperative studies. *Alcoholism: Clinical and Experimental Research.* 1995;19:635–641.
57. Nanji AA, Yang EK, Fogt E, et al. Medium-chain triglycerides and vitamin E reduce the severity of established experimental alcoholic liver disease. *Journal of Pharmacology and Experimental Therapeutics.* 1996;277:1694–1700.
58. Shaw S, Rubin KP, Lieber CS. Depressed hepatic glutathione and increased diene conjugates in alcoholic liver disease: Evidence of lipid peroxidation. *Digestive Diseases and Sciences.* 1983;28:585–589.
59. Lieber CS, Robins SJ, Li J, et al. Phosphatidylcholine protects against fibrosis and cirrhosis in the baboon. *Gastroenterology.* 1994;106:152–159.
60. de la Maza MP, Petermann M, Bunout D, Hirsch S. Effects of long-term vitamin E supplementation in alcoholic cirrhotics. *Journal of the American College of Nutrition.* 1995;14:192–196.
61. Lieber CS. S-adenosylmethionine (SAME): Its role in the treatment of liver disorders. *American Journal of Clinical Nutrition.* 2002;76:1183S–1187S.
62. Lieber CS, Casini A, DeCarli LM, et al. S-adenosyl-L-methionine attenuates alcohol-induced liver injury in the baboon. *Hepatology.* 1990;11:165–172.
63. Mato JM, Camara J, Fernandez de Paz J, et al. S-adenosylmethionine in alcoholic liver cirrhosis: A randomized placebo-controlled double-blind multicenter clinical trial. *Journal of Hepatology.* 1999;30:1081–1089.
64. Aleynik SI, Leo MA, Aleynik MK, Lieber CS. Polyenylphosphatidylcholine prevents carbon-tetrachloride-induced lipid peroxidation while it attenuates liver injury and fibrosis. *Journal of Hepatology.* 1997;26:554–561.
65. Ma X, Zhao J, Lieber CS. Polyenylphosphatidylcholine attenuates nonalcoholic hepatic fibrosis and accelerates its regression. *Journal of Hepatology.* 1996;24:604–613.

66. Lieber CS, Leo MA, Aleynik SI, et al. Polyenylphosphatidylcholine decreases alcohol-induced oxidative stress in the baboon. *Alcoholism: Clinical and Experimental Research*. 1997;21:375-379.